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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,895	04/08/2004	Nha Q. Do	CHC-001	8898

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EXAMINER

MURALIDAR, RICHARD V

ART UNIT	PAPER NUMBER
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2838

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/820,895	Applicant(s) DO, NHA Q.	
	Examiner Richard V. Muralidar	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 7-9, 12, 13, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Baker et al [US 4376250].

With respect to Claim 1, Baker discloses a mobile power device [Fig. 1 portable apparatus for supplying AC power] to supply alternating current (AC) voltage to an appliance [col. 3 lines 4-7], comprising: an enclosure [Fig. 2 formed by cover 60] having a first chamber [Fig. 2 rearward of splash guard 64] and a second chamber [forward of splash guard 64], the enclosure having an AC output adapted to power the appliance [Fig. 2 duplex AC outlet 102]; one or more user-replaceable energy storage units [Fig. 2 dc storage batteries 30] adapted to be inserted into the first chamber; an external power source coupled to the one or more energy storage units and adapted to charge the energy storage units [col. 3 lines 27-31]; and an inverter positioned in the second chamber [Fig. 3 electrical

components 42, forward of splash guard 64] coupled to the one or more energy storage units and the AC output, the inverter receiving direct current (DC) voltage from the one or more energy storage units and generating AC voltage [col. 4 lines 60-67].

With respect to Claim 2, Baker discloses that the first chamber comprises a movable door to insert the energy storage units [Fig. 2 hinged cover 60; col. 4 lines 22-27].

With respect to Claim 3, Baker discloses that each energy storage unit comprises a battery [Fig. 2 storage batteries 30; col. 3 lines 61-66].

With respect to Claim 5, Baker discloses that each energy storage unit comprises a dry-cell or wet-cell battery [col. 3 lines 61-66].

With respect to Claim 7, Baker discloses that the external power source comprises a battery charger [Fig. 4 battery charger 50; col. 3 lines 27-31].

With respect to Claim 8, Baker discloses that the external power source comprises a step-down transformer and a capacitor [col. 4 line 68 and col. 5 lines 1-10].

With respect to Claim 9, Baker discloses that the external power source comprises an AC line, further comprising an AC to

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DC converter [SCR rectifiers are disclosed in col. 5 lines 4-10] positioned in the second chamber.

With respect to Claim 12, Baker discloses that the enclosure or housing is waterproof [col. 4 lines 22-27].

With respect to Claim 13, Baker discloses a handle attached to the enclosure [Fig. 1 forward handle 72].

With respect to Claim 19, Baker discloses a method of operating a mobile power device to supply alternating current (AC) voltage to an appliance [col. 3 lines 4-7], comprising: inserting one or more user-replaceable energy storage units [Fig. 2 dc storage batteries 30] into the mobile power device; applying an external power source to charge the energy storage units; and converting direct current (DC) voltage from the one or more energy storage units and generating AC voltage to power the appliance [col. 4 lines 60-67].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al [US 4376250].

With respect to Claim 4, Baker discloses that each energy storage unit comprises a solid polymer without solvent [Col.3 lines 66-68 refers to deep discharge batteries. While not of the solid state non-liquid type, it is understood that if these batteries were available at the time of this invention in 1983, they would have been utilized here for their designed deep discharge capabilities, as well as their advantage in avoiding the problems of electrolyte spillage caused by a battery mounted on a mobile platform].

With respect to Claim 6, Baker discloses that each energy storage unit comprises a capacitor [it is well known in the art of energy storage that a capacitor can be used as an energy storage device in lieu of, or in conjunction with, a battery. For example, Coakley et al [5962806] disclose a stun-gun device that utilizes a capacitor, a converter, and a battery to develop a high output charge].

Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al [US 4376250] in view of Umezawa et al [US 6778370].

With respect to Claims 10 and 11, Baker discloses an inverter [col. 4 lines 60-67; col. 5 "Inverter Circuit"]

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paragraph], but does not specify a PWM inverter with sine wave filter.

Umezawa et al [5381328] discloses a PWM inverter with sine wave filter suitable for mobile power sources.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Baker with a PWM inverter and sine wave filter for the benefit of lower power consumption, higher efficiency, and size reduction of the electronics [col. 3 lines 65-69 and col. 4 lines 1-2].

Claims 14-18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al [US 4376250] in view of Simonelli et al [US 5982652].

With respect to Claim 14, Baker discloses the device of Claim 1; however, Baker does not teach a back-up energy storage device coupled to the inverter to provide temporary power to maintain the AC voltage while one or more of the user-replaceable energy storage units are replaced.

Simonelli [US 5982652] discloses a modular UPS system [i.e. a portable AC power supply with hot-swap capability] with back-up energy storage device coupled to the inverter to provide temporary power to maintain the AC voltage while one or more of the user-replaceable energy storage units are replaced [col. 1

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lines 24-26; Col. 7 lines 16-18 discloses hot-swappable batteries that can be removed whilst the device supplies power].

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Baker with hot-swappable capability for the benefit of reducing downtime at the job site [one of battery 30 could be changed out while the other served as a temporary supply, to avoid interruptions to job site power tools]. This would be especially advantageous when powering floodlights for outdoor night use.

With respect to Claim 15, Baker discloses a system, comprising: a mobile power device to supply alternating current [Fig. 1 portable apparatus for supplying AC power] (AC) voltage to an appliance [col. 3 lines 4-7], the power device having an enclosure [Fig. 2 formed by cover 60] having a first chamber [Fig. 2 rearward of splash guard 64] and a second chamber [forward of splash guard 64], the enclosure having an AC output adapted to power the appliance [Fig. 2 duplex AC outlet 102]; one or more user-replaceable energy storage units [Fig. 2 dc storage batteries 30] adapted to be inserted into the first chamber; an external power source coupled to the one or more energy storage units and adapted to charge the energy storage units [col. 1 lines 54-66]; and an inverter positioned in the second chamber coupled to the one or more energy storage units

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and the AC output, the inverter receiving direct current (DC) voltage from the one or more energy storage units and generating AC voltage [col. 4 lines 60-67]; however, Baker does not disclose a means to maintain AC voltage while the energy storage units are replaced.

Simonelli discloses a modular UPS system [i.e. a portable AC power supply with hot-swap capability] with back-up energy storage device coupled to the inverter to provide temporary power to maintain the AC voltage while one or more of the user-replaceable energy storage units are replaced [col. 1 lines 24-26; Col. 7 lines 16-18 discloses hot-swappable batteries].

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Baker with hot-swappable capability for the benefit of reducing downtime at the job site [one of battery 30 could be changed out while the other served as a temporary supply, to avoid interruptions to job site power tools]. This would be especially advantageous when powering floodlights for outdoor night use.

With respect to Claim 16, Baker discloses that the first chamber comprises a movable door to insert the energy storage units [Fig. 2 hinged cover 60; col. 4 lines 22-27].

With respect to Claim 17, Baker discloses that each energy storage unit comprises a battery [Fig. 2 storage batteries 30; col. 3 lines 61-66].

With respect to Claim 18, Baker discloses that the energy storage unit comprises a capacitor [it is well known in the art of energy storage that a capacitor can be used as an energy storage device in lieu of, or in conjunction with, a battery. For example, Coakley et al [5962806] disclose a stun-gun device that utilizes a capacitor, a converter, and a battery to develop a high output charge].

With respect to Claim 20, Simonelli discloses that energy storage units in the field can be substituted without interrupting power to the appliance [col. 1 lines 24-26; Col. 7 lines 16-18 discloses hot-swappable batteries].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard V. Muralidar whose telephone number is 571-272-8933. The examiner can normally be reached on Monday to Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on Monday to Friday 8-5. The fax phone number for the

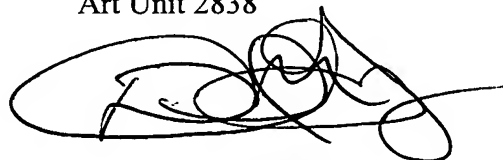
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organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RVM
1/9/2006

Richard V Muralidar
Examiner
Art Unit 2838

A handwritten signature in black ink, appearing to read 'David Gray', with a large, stylized flourish extending to the right.

David Gray
Primary Examiner